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Building high capacity, aligned education systems

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Introduction

Changes in society and the economy stemming from globalisation and technological change have radically altered the mission of schools. They are now required to do things that until now have been regarded as impossible or unnecessary, namely to ensure that all students achieve high standards of basic education. There have long been individual teachers and some schools able to improve learning outcomes dramatically for all students. The problem has been in generating a knowledge base on how to do this consistently and to scale. This paper focuses on ten of the most important lessons learned about school improvement and considers the implications of these lessons for building high capacity, aligned education systems.

Vision and reality

The history of education can be viewed both as a journey characterised by purpose and direction, and also as a series of responses to external events, with many detours and revisiting of familiar places. Progress requires the ability both to pursue a vision and at the same time to deal with the events that get in the way of achieving the vision. Over the decades, real progress has been made. One of the great visions of reformers during the last century was that of universal access to school education. The constraints to realising that vision have been removed in many nations, although achieving full participation by all students remains elusive. As a result, access is no longer the key issue for most first world countries.

The current mission of schools at the beginning of the 21st century is not about access. It is to ensure that all students achieve increasingly higher standards of an education that equips them to be life-long learners (Marsh, 1999; Tucker and Coddling, 1998). It is a vision of excellence, of equity, of empowerment and of constant improvement. It reflects a goal that has long been advocated for ethical reasons, but has been argued most forcefully in recent years for more pragmatic reasons associated with changes in society and the economy stemming from globalisation and technological change.

While there are compelling arguments for pursuing the new vision the dimensions of the task are formidable. We have become much more assiduous at measuring academic

performance, and as a consequence the magnitude of the challenge has never before been so quantified, or revealed in such stark terms. The evidence indicates that reality falls short of the vision by a wide margin.

Making the new vision real

That reality falls short of the vision is not surprising. The form of mass education that our schools currently provide was not designed to ensure that *all* students achieve high standards and become effective life-long learners. As Elmore (2002) has commented in the American context:

With increased accountability, American schools and the people who work in them are being asked to do something new – to engage in systematic, continuous improvement in the quality of the educational experience of students and to subject themselves to the discipline of measuring their success by the metric of students' academic performance. Most people who currently work in public schools weren't hired to do this work, nor have they been adequately prepared to do it either by their professional education or by their prior experience in schools. (p 3)

Similar comments apply to schools in other countries. While international surveys such as TIMSS and PISA provide strong evidence that system-level effects at the national level are powerful and that some systems are significantly more successful than others in approaching the goal of 'high standards for *all*', no nation could be regarded as having made universal the kind of deep transformation of schools implied by the new vision for school education.

What is clear is that the problems to be overcome in realising the new vision are systemic problems and thus solutions must be systemic too. They involve ensuring that all schools function as 'high reliability organisations' (Stringfield, 1995) that consistently get all students to high standards. Large systems that provide any kind of human service are apt to be flawed and unreliable.¹ All of us know about the delays and frustrations of seeking medical services, sorting out problems with our credit cards, getting planning permission, and so on, so why should we expect getting a good school education to be any easier?

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In part, the answer is that we already know that it is possible to build systems that are much more effective than many that we currently tolerate. Another part of the answer is that the stakes have never been quite so high as they are right now: getting a good education does matter a great deal for both individuals and nations. This means that there is both the incentive to build effective systems and the know-how to build them. It is from this perspective that this paper focuses on the challenge confronting education policy makers – the task of building high capacity, aligned education systems.

Systemic reform

Researchers in the field of school effectiveness have long theorised about the need to adopt a system-wide approach to studying schools and the term 'educational effectiveness' (as opposed to the more narrow notion of 'school effectiveness') was advanced by Scheerens and Creemers (1989) as a way of better recognising the different levels of influence on student learning, including the student, the teacher/classroom, the school, the system and the wider external environment of the school.

In the field of school improvement, Fullan (2000) has argued that we are now witnessing the return of system-wide reform, following a series of failed attempts in the 1950s and 1960s. This is probably true if one considers the North American context. Elsewhere, system reform got under way in the 1980s and continues unabated. Nonetheless, his analysis of the nature of the early attempts at system-wide reform and the reasons for their failure is well worth rehearsing.

Quoting Elmore (1996), Fullan observes that these early initiatives can mostly be characterised as progressive attempts to reform pedagogy, reflecting what were, at the time, new views of how students learn (especially social constructivism). They were promoted by educators and intellectuals who were focused on the substance of change rather than on processes for achieving change.

If there were any underpinning theory of change behind these reform initiatives it was a form of 'contagion' theory that assumed good ideas would be adopted widely because of their intrinsic merit. It was a flawed theory: the initiatives did produce isolated and short-lived pockets of innovation that illustrated the power

of the new thinking, but in the main little changed.

All too often, the reforms were adopted superficially without a sufficiently deep understanding of what they really implied, or they were not implemented at all. An example of one such reform initiative from the early 1970s is MACOS (Man: A Course of Study). As evidence accumulated during the late 1970s of the lack of impact of these initiatives, policy-makers ceased to view spending on systemic school reform as an investment. Worse, progressive education got a bad name and pressures mounted in some quarters to return to traditional ways of thinking about teaching and learning.

The accountability movement

Assuming that we are indeed witnessing a return to systemic reform, how is it different from the earlier attempts? It is clearly different in that it is being driven primarily by external pressures for improved productivity rather than by internal, substantive pressures for educational change. The public and policy makers want results because they know the consequences of failure. In the knowledge society, low performing school systems constitute one of the more serious impediments to economic and social progress. As a result, in many nations policy makers have responded by seeking to make schools and increasingly school systems more directly accountable for student learning.

Since the late 1980s education policy has been marked by the inexorable rise of the accountability movement, which seeks to define standards, measure progress towards those standards, and hold schools publicly accountable for the progress their students make. The theory of change here, as Tucker (2002) has observed, often appears to involve the somewhat disingenuous notion 'that educators have always known how to greatly improve student performance, but were just waiting for someone to put more pressure on them to do it' (p 2).

Policy makers are moving with greater boldness than ever before to ensure that pressure is applied to schools and school systems to improve student performance. In the USA, for example, the new *No Child Left Behind* legislation enacted in January 2002 requires states to

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- establish standards for academic proficiency in reading, mathematics and science;
- establish measures for assessing all students in public schools each year in English and mathematics in grades 3–8 and in one of grades 10–12, and later on in science;
- develop a definition of what will constitute ‘Adequate Yearly Progress’ (AYP) towards the standard that has been set for academic proficiency; and
- set targets for schools that will enable them to achieve 100% academic proficiency over 12 years.

States are accountable under the law for ensuring that

- 95% of all subgroups participate in the State’s annual assessment program;
- 100% proficiency in ELA and math is achieved by 2014;
- each subgroup (gender, poverty, ethnic and language background) makes AYP to proficiency;
- all schools and all districts make AYP;
- annual progress reports, disaggregated by subgroups, are published; and
- they implement a set of progressively more serious consequences for districts and schools that fail to meet AYP.

The *No Child Left Behind* legislation was passed with overwhelming support from both sides of politics. The President, George W Bush, in commenting on the provisions of the new legislation, revealed the extraordinary degree of faith among legislators in accountability to lever improvement in school education, when he said:

Accountability is an exercise in hope. When we raise academic standards, children raise their academic sights. When children are regularly tested, teachers know where and how to improve. When scores are known to parents, parents are empowered to push for change. When accountability for our schools is real, the results for our children are real.

There is some research evidence in support of the proposition that accountability measures involving the regular testing of students and the publication of school results, are associated with improved student learning outcomes (see, for

example, Carnoy, Loeb and Smith, 2001). But both logic and the experience of the past tell us that sustained, systemic improvement requires that support is commensurate to the pressure applied. To quote Elmore (2002) again:

Without substantial investment in capacity building, all that performance-based accountability systems will demonstrate is that some schools are better prepared than others to respond to accountability and performance-based incentives, namely the ones that had the highest capacity to begin with. (p 23)

As suggested earlier, there are good reasons for believing that it was the lack of attention to the change process – and inadequate support for building up the capacity of schools – that doomed the reform initiatives of the 1950s and 1960s. Fortunately, we now know much more about the conditions for change and reform in education, thanks to the efforts of scholars who have codified our knowledge of educational change (eg, Hargreaves, Lieberman, Fullan and Hopkins, 1998).

This paper presents a list of ten of the more important lessons relevant to improving schools and discusses the implications for systems that would seek to apply them in seeking to ensure that all students achieve high standards.

Lessons learnt about improvement

The following summarises ten of the most critical lessons for systems wishing to improve student learning and staff capacity in schools. Most are well documented in the literature, but not all have been rigorously researched or are indeed capable of being researched in a scientifically rigorous way. On the other hand, the evidence that does exist for each one is compelling and none is especially controversial.

Lesson 1

Improvement is more likely where there is consensus about the important outcomes of schooling (both cognitive and moral), where there are high expectations of student achievement and behaviour embedded in well-defined performance standards, aligned assessment of student work and behaviour, targets to be met as schools make progress towards meeting those standards, and incentives for meeting targets. This is the message of the standards movement as distinct from the accountability movement.

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Lesson 2

Ongoing school improvement is more likely when a more comprehensive, systems approach to improvement is adopted. This involves designing and aligning all the elements that contribute to student performance. It also involves attending to the culture or ethos of the school in which these elements are embedded and interpreted. Finally, improvement efforts are going to be most effective when they focus on high leverage strategies that have a large impact on outcomes, but require relatively low levels of teacher effort in the sense of requiring teachers to work smarter rather than harder (Hargreaves, 2001).

Lesson 3

Leadership is crucial. Improvement does not occur without strong instructional leadership that is focused on the academic goals of the school. Many school leaders spend too much time on management issues unconnected with improving student performance and too little time addressing the core function of the school, namely teaching and learning. While the principal is the key player in leading improvement efforts, instructional leadership is a shared responsibility that needs to be a distributed function within the school.

Lesson 4

Improvement requires being research-minded and evidence based. Effective schools seek out proven practices and programs that align with what already works within the school. They constantly collect and analyse data to find out what is and is not working and seek out high leverage solutions in situations where there is little external evidence of the effectiveness of different courses of action. In the past, too much of what went on in schools was untested and adopted on the basis of ideology or continued without any evidence of whether it was effective.

Lesson 5

Improvement is not just about short-term results; it is about building the capacity for continuing change and improvement. Improvement thus requires ongoing and substantial investment in building staff capacity and in creating a learning culture that is focused on outcomes, continuous improvement and working collaboratively to reach common goals. Effective professional development needs

to address both pedagogy and content, and both competence and beliefs and understandings. This requires time for both individual and team learning and reflection, and the right balance of on-site and off-site professional learning.

Lesson 6

In the final analysis, school improvement is about improving the quality of classroom teaching and this means penetrating the classroom door, to focus on the quality of teaching and learning. Teaching is about establishing students' starting points and identifying what they currently do and do not know and can and cannot do; setting instructional goals to move them forward; and, in a very deliberate way, scaffolding the learning to move them to a higher level of knowing and ability. Students have different starting points and do not learn the same things at the same time or pace. This means that while the standards remain constant, time and support for individual students must be allowed to vary. Most schools and classrooms are still structured in ways that hold time and support constant for all students. They continue to be places in which there is 'conveyor-belt' delivery of curriculum content without careful analysis of the actual learning needs of each student.

Lesson 7

Sustained and large-scale improvement takes time, on-going commitment to the same change agenda and maintenance of the resources needed to implement that agenda. Improvement efforts are facilitated and change is sustained in contexts in which policies, resources and processes are aligned to support the improvement agenda and are constant over time, and where serious attention is given to protecting schools from distractions and competing agendas. It is also promoted where there is sustained investment in building up the knowledge base and the trust of all participants engaged in the change process.

Lesson 8

Rates of improvement vary according to the capacity of schools to engage in improvement processes. Strategies for improving low performing schools with low capacity for change are most successful when they focus initially on limited objectives and short-term successes and when they provide a high degree of structure and direction. Schools with a low

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capacity for change need more time and more external support than other schools and are not able to pursue the many and far-reaching changes implied by most comprehensive school reform models without time and skilled support. On the other hand, too much support can lead to dependence on the provider and no development of internal capacity.

Lesson 9

Intervention is more successful the sooner one intervenes. Improving learning outcomes in elementary/primary schools is easier than improving learning in secondary schools. This is a reflection of the fact that it is easier to educate younger students who do not have long histories of failure. However, the very structures of secondary education – particularly departmentalisation, fragmentation of time available for learning and the large numbers of students taught by each teacher – generate school cultures that present additional barriers to change. In addition, the goal of getting all students to high standards runs counter to the traditional role of many secondary schools of sorting and sifting students for entry to higher education or work.

Lesson 10

Improvement is more likely to occur in schools that implement reforms as designed. For example, research into the impact of comprehensive school reform models (Berends, Bodily and Nataraj Kirby, 2002) indicates that after two or three years only about a half of schools implement at a level consistent with expectations. In other words, the fundamental problem is not so much the nature of the reform but how to achieve full implementation in schools. The tendency of schools to want to make local decisions about what to implement and how is not problematic in high capacity, high performing schools that are already experienced and successful in improving student performance. The same tendency in a low capacity, low performing school is likely to mean that the changes that are most critical to improvement never happen.

No quick fixes and no extra resources

The ten lessons outlined above do not add up to a set of easy answers or quick fixes (Stoll and Myers, 1997). They imply a process that takes time, that involves many uncertainties and that will be harder for some schools than for

others. In addition, at the end of the day, school education is never going to be an exact science and human imperfection will mean that there will always be room for improvement. This is the case for all service organisations.

Incorporating the above lessons into the next wave of large-scale, systemic reform, is going to be critical to achieving the vision of high standards for all. But there is an additional handicap this time round and that is the unlikely prospect of significant additional resources being available to engage in the process. Everywhere, policy makers are looking to the new wave of reform to deliver increased productivity in the same way that business achieved in a decade or more earlier: without additional resources or investment, but through a restructuring and reallocation of existing resources.

A clear implication of the above is that it is very hard, if not impossible, for schools to bring about sustained change and improvement without strong system pressure and support. This leads to a consideration of the nature of school systems and their evolving role in school improvement and reform.

The nature and changing role of school systems

In most countries, public education is normally provided by government systems that are secular in character, although in many nations, systems of denominational schools provide education to a significant proportion of students, with full government funding, or with partial funding from public sources. In small countries, there is typically a single-level system, whereas in larger countries there are more usually multi-tiered systems involving federal or national, state or provincial, and local education authority or district levels, each operating within different and nested legislative jurisdictions.

Some of the larger school systems, such as those of Los Angeles, New York and New South Wales, are some of the largest organisations of any kind, rivalling the military and the largest of corporations in terms of recurrent expenditures and staffing. They serve millions of students, employ tens of thousands of staff and have multi-billion dollar budgets. Other systems, particularly districts, are tiny and embrace a mere handful of schools. For

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example, of the 15,000 local school boards in the USA, 80 percent enrol fewer than 3,000 students (Land, 2002).

In the early days of their establishment, systems existed primarily to provide access to education. They built new schools and developed comprehensive systems of provision that guaranteed a minimum standard of provision for all. As the number of schools and enrolled students grew, so did the system to support them grow. They tended to focus on managing the inputs into the educational system (buildings, staffing, curriculum, materials and supplies, and so on). They also tended to exercise a considerable degree of top-down authority over the schools under their control.

Decentralisation and devolution

With the possible exception of the USA, where a strong tradition of local involvement in education persists, there has been a strong movement in most economically-advanced nations over the past quarter of a century for school systems to decentralise educational administration and to devolve responsibility, authority and accountability directly to the school level (Caldwell, 1993; Caldwell and Spinks, 1992). This has often been accompanied by more centralised control of standards, curriculum and assessment, and by the imposition of processes for ensuring accountability for the delivery of educational services and especially for improved student learning outcomes (Caldwell and Hayward, 1998).

In other words, these systems have changed from a focus on means to a focus on ends. They have begun to play a more aggressive role in defining and requiring outcomes, but have been willing to allow schools to determine the means whereby they will deliver agreed outcomes using the resources allocated by the system.

Devolution of responsibility has been advocated because it leads to better decisions by those who understand and have to deal with issues as they arise at the local level. In addition, devolution can be used to reduce the size and cost of bureaucracy and to ameliorate over-politicisation of education by interest groups at the expense of more immediate clients. But it also builds on an important ethical principle, namely the principle of 'subsidiarity', which is broadly concerned with the limits of the right and duty of the public authority to intervene in social and economic affairs.

The origins of this principle can be traced to the Papal Encyclical *Quatragesimo Anno*, delivered by Pius XI in 1931, but is given full expression in Section 93 of an Encyclical of John XXIII, which states as follows:

It is a fundamental principle of social philosophy, fixed and unchangeable, that one should not withdraw from individuals and commit to the community what they can accomplish by their own enterprise and industry. So, too, it is an injustice and at the same time a grave evil and a disturbance of right order, to transfer to the larger and higher collectivity functions which can be performed and provided for by lesser and subordinate bodies. Inasmuch as every social activity should, by its very nature, provide a help to members of the body social, it should never destroy or absorb them.

The sophistication and capacity of many, if not most, school communities is such as to make the withholding of authority for most of the day-to-day decisions they make unjust. On the other hand, it can be argued that the reverse is also true and that less-than-optimum decisions will be made, it is more expensive, and it is ethically unjust to devolve to schools authority for those things that they cannot accomplish themselves.

The role of systems in supporting schools

In terms of realising the new vision of high standards for all students, it is clear that there are some functions that no schools are able to accomplish by themselves. Hill and Crévola (1999) identify the following functions that systems need to perform on behalf of all schools:

- determine standards and set system-wide and school-specific, year-by-year targets;
- focus school support services and available funds on achieving the standards and targets;
- put in place accountability and incentive arrangements linked to performance against standards and targets;
- conduct periodic full-cohort testing to monitor performance against the standards and targets; and

conduct or sponsor research and evaluation of those programs and designs that have been identified as most useful in meeting the standards and targets.

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A further function is to arrange for high-level leadership training for principals and key teachers in schools and for system administrators. Leading and managing schools given the goal of high standards for all, calls for substantial investment in a new and special kind of training in instructional leadership (Tucker and Coddling, 2002).

All except the second function are high-level system functions that require action at a national and/or State/Provincial level. Individual schools and most local education authorities and districts are not in a position to engage in credible standards-setting exercises or to perform associated accountability, monitoring and research functions.

Indeed, even large States are likely to want to engage in such activities in collaboration with other States and making use of the services of large and expert testing organisations. In the past, these functions have simply not been performed or have been performed in a partial or inconsistent fashion that has had low impact on schools and the system. By default, districts, schools and individual teachers have made local decisions about standards, targets and monitoring student progress, leading to a lack of system coherence or external pressure for improvement.

Then there are certain things that **some** schools are **unable** to accomplish by themselves, because of a lack of capacity. In the case of failing or struggling schools, systems need to be able to intervene in ways that are unnecessary for effective schools. This may involve changing the governance, the leadership or staff of these schools, and it will certainly mean providing them additional targeted support and assistance.

In other words, the level of direct intervention and support is proportional to need: schools with little need of direct intervention and support can be given considerable authority and responsibility to use the resources allocated to them whereas the system has a duty to assume direct authority and responsibility for schools that are demonstrably ineffective, until they have acquired the capacity to be self-managing and effective. In theory, the number of schools requiring such support should diminish and should involve different schools over time. In practice, it is likely that there will be persistent problems in schools serving disadvantaged communities.

All of the above is the work of systems, whatever form they may take and however they may get their work done. Because of the need for direct contact with individual schools, focusing school support services and available funds on achieving high standards for all is something that is best performed at a local level. The required support can be by local education authorities or districts, working within national or State/Provincial frameworks that ensure consistency and provision of resources according to need.

Alternatively, the required support can be provided through the use of a burgeoning sector that has not existed in the past, including both not-for-profit and commercial consultancy organisations and providers. Yet another scenario involves the withdrawal of the public sector from educational provision and the involvement of private sector education management firms or not-for-profit organisations in running 'branded' schools, with or without full public funding.

In the short term, it is likely that an open market will operate and all of the above will be tried, often in the same place. This means that what it means to be a 'system', as far as the school support function is concerned, is likely to vary widely from place to place and from time to time, but the criteria for determining the effectiveness of the solution are the same for all.

The status of teaching

Whatever versions of 'system-ness' prevail, there are crucial decisions to be made regarding the status of, and the level of investment in, teaching as an occupation. A high proportion of total expenditures on school education is accounted for by teacher salaries and the effectiveness of any school system depends overwhelmingly on the effectiveness of its teachers, so a key issue is determining the best strategy to improving teacher effectiveness.

Should teaching be regarded as a profession in which members are delegated wide authority and given extensive discretion in making curricular decisions? Or should teachers be regarded as 'technicians' requiring training in providing student services and implementing curriculum programs designed and developed by others? Alternatively, does the answer lie in occupational differentiation involving, say, a smaller proportion of highly-qualified and

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highly-paid professionals and a larger number of less-highly qualified and paid technicians?

There are two issues facing systems that are becoming increasingly unavoidable:

1. *Wages and effectiveness*

What is a fair wage for those who can deliver the new agenda and bring all students to high standards? Behind this question is the pressing need to recognise that not all teachers or administrators are equal in terms of their effectiveness and that good teachers and school administrators are substantially underpaid and under-recognised.

2. *Vacations, planning and training*

How will teachers and school administrators get the training they need and the time to plan and develop professionally while enjoying working conditions that assume teachers are not required to be in attendance when students are not present? Behind this question is the stark truth that long teacher vacations are an anachronism in an occupation that demands extensive time for planning, collaboration, consultation, professional development and training, all of which require extensive non-contact time with students. Low wages and lack of training opportunities simply promote the decline of teaching into a feminised, low-paid occupation and ensure that it is the occupation of last resort for those seeking entry to the professions. Better that teachers were paid a higher salary, required to work conventional hours and were able to devote much more time to team planning and training without intruding into the students' school day.

Answers to both of the above issues imply long-overdue, but very contentious and difficult-to-achieve structural reforms of the teaching profession. These go beyond recent well-meaning, but in the end dead-end efforts, to lever teacher quality and effectiveness, through initiatives focused on promoting teaching standards and standards for principals and school administrators, but unaccompanied by structural reform of teaching.

Building high performing, aligned systems

Within the public sector, one rarely, if ever, has the chance to build new education systems from scratch. Most of the time, the challenge is one of working to bring about change within

existing systems. Within the private sector it is a different matter; new systems are being 'invented' all the time. Rebuilding existing systems is probably harder, however, than building new systems.

If we take each of the ten lessons noted earlier, there is much that can be said about building high performing, aligned education systems.

Learning from Lesson 1

In order to learn from Lesson 1 and to ensure alignment of standards, assessments, curriculum and accountability for performance, school education systems need to assert centralised control over these functions. It is highly technical, highly political and very expensive work. Too many systems attempt it alone, when they should be collaborating to get the work done as a consortium of states or preferably as a national effort.

Learning from Lesson 2

Ensuring widespread adoption of a comprehensive, whole-school design approach to school improvement, as implied by Lesson 2, requires substantial system-level understanding, commitment and support. High capacity schools and school systems are likely to want to explore the option of developing internal school designs (Dimmock, 2002). In systems in which there are significant numbers of low capacity schools it is likely to be more appropriate for systems to adopt one or more model school designs and work with an external design provider – to develop, over time, the capacity of the system, and of schools within the system, to implement these designs locally.

Learning from Lesson 3

Development of the leadership capacity of schools to implement reform and engage in sustained improvement initiatives is a big challenge that many systems are confronting right now. In the past, systems have not been especially proactive in defining or providing access to the right kind of leadership training that is required by principals and senior teachers in schools. They are now more aware of the inadequacy of most existing leadership courses – in terms of their lack of focus on instructional leadership, and also of the gross lack of investment in quality training of school leaders, relative to levels of investment in comparable leadership programs in business and the military.

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Learning from Lesson 4

The adoption of evidence-based, data-driven approaches to improvement also requires high levels of system direction and support. School systems need to put in place processes for the smooth and efficient collection of carefully-selected sets of indicators of inputs, processes, outputs and outcomes. The activity of monitoring the overall performance of systems and schools inevitably exposes problem areas, and generates a need for further data and the ability to drill more deeply into the cause of problems (Fitz-Gibbon and Kochan, 2000). It also requires getting down to the class teacher level, which is where the use of a data-driven approach to improvement can be a high-leverage strategy, when employed with teachers who can make intelligent use of diagnostic and other information, to drive classroom instruction. All too often, systems engage in high level uses of data for accountability purposes, but do not provide the support to follow through with support for class level uses of data for instructional purposes.

Learning from Lesson 5

Providing ongoing and intensive training and professional development of staff also requires high levels of system direction and support, but of a qualitatively different kind than has been provided in the past. Elmore (2002) talks at length about what professional development in high capacity aligned school systems might look like:

System officials would have to have considerable expertise about the instructional practices they expect teachers to acquire. That expertise would have to entail, not just teaching teachers how to teach differently, but actually working with teachers in their classrooms to solve problems of practice in a way that supports continuous improvement. The system would have to manage its resources to support and fund the work of teachers and professional developers in sustained interaction. It would also have to set priorities, clearly stating which problems of instructional practice are central and which peripheral to overall improvement before deciding on how to allocate professional development resources. (p 25)

Few systems have acquired the capacity to approach professional development in this way, although examples do exist.

Learning from Lesson 6

We face the challenge of designing schools and promoting teaching that reflects knowledge about how students learn. As noted earlier, most schools and classrooms are still structured so as to facilitate a 'conveyor belt' delivery of curriculum that holds time and support constant for all students. In other words, they are places in which the learning needs of individuals come second to the needs of teachers to 'cover' the curriculum.

Focused teaching that consistently and consciously engages students in their 'zone of proximal development' is very commonly observed in interactions between parents and children. It is also commonly observed in one-on-one situations such as sports coaching, or teaching a musical instrument. But as study after study has confirmed, it remains uncommon in classrooms (Tharp and Gallimore, 1988).

When one inquires why the 'conveyor belt' approach to teaching persists, the answer one gets almost always includes 'system pressures and expectations' to keep all students moving at the same pace regardless of differences in the starting points of students.

Learning from Lesson 7

Lesson 7 has to do with the consistency of policies and resources and the elimination of competing agendas. Cohen and Lowenberg Ball (1999) speak of the negative impact on improvement initiatives of the proliferation of different and often contradictory advice that systems send to school staffs, and of the fickleness of much education policy.

The attention spans and issue agendas of many agencies are short, so the content of many activities – including policymaking and school improvement – typically shift frequently. Many elected officials are more concerned with making a mark by legislative or executive action than building programs or policies that might bear fruit over a decade or more. Policy agendas thus shift rapidly, and policymakers often flit from issue to issue in quick succession. (p 13)

It is no accident that early literacy reforms within the Catholic Education Office of Victoria occurred under the leadership of Monsignor Tom Doyle, who served as the system's Director for 22 years, making him the longest-serving

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school system head in the history of Australian education. In a North American context, it is also no accident that District #2 in New York achieved their gains over a period of eight years (1987–1996) during which there was a single, strong leader, namely Anthony Alvarado, who ensured single-minded and consistent policies and priorities (Fullan, 2001, p 56).

Learning from Lesson 8

Intervening in schools and providing direction and support in proportion to need is a key principle of many systems that have instituted high stakes accountability arrangements. For example, the Department for Education and Skills (2001) in the UK – in its White Paper, *Schools Achieving Success* – expresses this notion in the following terms:

Two clear principles underpin our approach to LEA and school performance. We will combine challenge with support and continue to intervene decisively where necessary. Where an LEA or a school is succeeding, setting and meeting challenging objectives, and securing continued improvement in performance, it should be encouraged to carry on doing so without hindrance. But in case of failure, we will take decisive steps to secure rapid and irreversible improvement. (p 48)

An ongoing challenge for systems in operating such policies is that of selecting valid and reliable measures to identify low performing schools.

Learning from Lesson 9

There appears to be a general rule that the earlier one intervenes, the more likely it is that a successful outcome will ensue. Improvement initiatives can leverage student progress far more easily in Kindergarten and Grade 1 than in Grades 9 and 10. In the first two years of schooling, with expert one-to-one teaching, it is possible to bring low performing students up to average performance levels in a fairly short space of time. There is little or no evidence that this is possible with students in Grades 9 and 10. For this reason, and in a climate of scarce resources, systems should give first priority to getting all students under way in literacy and mathematics in the early years and on coordinating with preschools to assist in this endeavour.

While it is true that there are also good reasons for also giving a high priority to addressing symptoms such as negative attitudes to self and to school, low attendance rates, anti-social behaviour, and low completion and graduation rates, in secondary schools, addressing the underlying causes of these symptoms is likely to have little impact on student learning.

Learning from Lesson 10

Finally, improvement is more likely to occur in schools that implement reforms as designed. This is the theme of Bossidy and Charan's (2002) advice to business leaders entitled *Execution: The Discipline of Getting Things Done*. So many schools adopt programs but do not fully implement them, and yet are disappointed to find that they do not work. Developers of intervention programs consistently bemoan the low levels of implementation of their reforms and are frustrated by the lack of performance of students in schools where there is only partial implementation.

Implementation of reform – an example

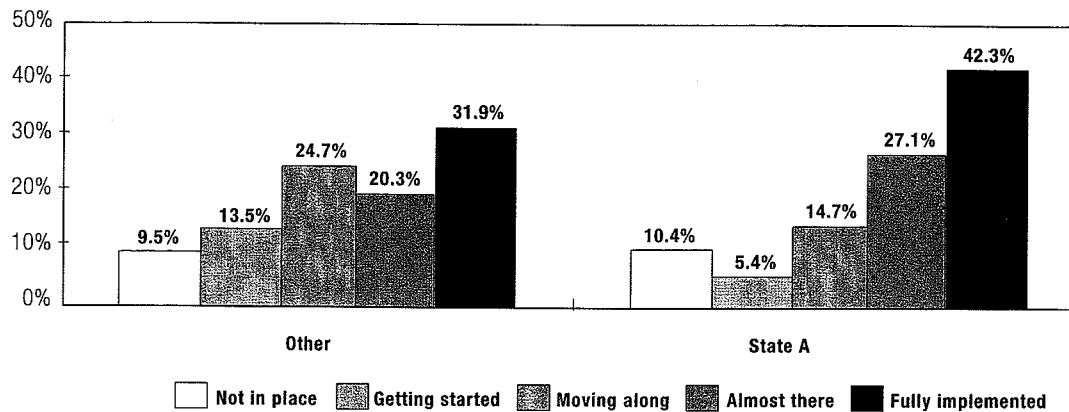
Systems have a key role to play in ensuring that things get done, once a decision has been made as to the nature of the improvement initiative, as the following example illustrates.

As part of the quality review process built into the America's Choice school design, the National Center on Education and the Economy (NCEE) assesses levels of implementation in each of the schools in its school design network. A diagnostic and assessment tool is used, which consists of a large number of items, each rated on a five-point scale ranging from No Implementation to Full Implementation.

A key finding to emerge from the administration of the NCEE instrument at the end of the 2001–02 school year was that the 115 elementary schools that commenced implementing the design in that school year, in one of the states in the south of the USA (referred to as State A), had markedly higher levels of implementation than other America's Choice elementary schools that also commenced implementing the design in that year.

Figure 1 indicates that – while across all items, some 52 percent of ratings of schools were in the 'Almost There' or 'Fully Implemented'

Systems have a key role to play in ensuring that things get done, once a decision has been made as to the nature of the improvement initiative

Figure 1. Levels of implementation – America's Choice elementary schools, end-of-year, 2001–02

categories in schools in all states except State A – some 70 percent were in these categories in schools in State A.

What explains this result? The answer is a combination of factors, but the main one is undoubtedly that in State A, the schools participated as part of a statewide initiative of the Governor of that state. Expectations were high and the state was deeply involved in all aspects of negotiating the support provided by NCEE. They insisted on special arrangements to enable them to have their own staff trained to work with schools in implementing the design. They required close and regular monitoring of implementation levels and schools that did not take implementation seriously were withdrawn from the program and support staff responsible for non-implementing schools were replaced.

At the end of the year, results on State tests showed marked increases for the America's Choice schools, once again suggesting that implementation matters.

Systems matter

Ensuring high standards for all is a very different challenge for school systems than the challenge of ensuring access to schooling for all. Not only does the mission change, but the work of the system changes also. It is not simply

that a new function has been added to the work of systems: the *raison d'être* of systems has changed. What is more, the system has become more rather than less important. This is because no school can achieve the goal of high standards for all alone and many schools need significant support to do so.

Learning how to make ongoing school improvement happen systemically is the journey modern school systems must take. While it is clear that there are different ways in which this goal can be accomplished, there are nonetheless some important lessons that have more general applicability. The task now is to focus on doing what it takes to build high-capacity, aligned education systems in which all students achieve high standards. Undoubtedly there will be many detours and diversions along the way, but we cannot afford to find ourselves returning to the same place any more: we need to move forward.

Crévola, Hill and Vineis (2002) argue that this requires simultaneous attention to both school and system design. Building on the Hill and Crévola (1997; 1999) set of nine design elements for schools, they identify a complementary set of design elements for systems. In a high capacity school system, the design elements at both the school and system level would operate effectively and in alignment with each other. The design elements for both schools and systems are summarised in Table 1 overleaf.

Learning how to make ongoing school improvement happen systemically is the journey modern school systems must take.

Table 1. School and system design elements

School	System
Beliefs and understandings	Mission, core values and resources
Leadership and coordination	Leadership and coordination
Standards and targets	Standards and targets
Monitoring and assessment	Monitoring and accountability
Classroom teaching strategies	School improvement strategies
Professional learning communities	Knowledge management
School and classroom organisation	System structures and processes
Student intervention and special assistance	School intervention and support programs
Home, school and community partnerships	Stakeholder relations

Some have identical labels at both the system and school level, although the nature of the work is different at the two levels. Others have somewhat different levels but they nonetheless complement each other.

Whether it is this model or another, in the coming years, the challenge for systems is to adopt a design approach to the system as a whole and to the schools they serve. Until now the focus has been mostly on schools; the task is now to broaden thinking to embrace systems to ensure that the certain knowledge we have about school improvement and change is used for the benefit of all schools.

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Endnote

- 1 In view of the fact that education is so often compared unfavourably with medicine, it is sobering to be informed by the Institute of Medicine that as many as 98,000 hospitalised Americans die every year and 1 million more are injured as a result of preventable medical errors (Boodman, S G (3 December, 2002) 'No End to Errors', *The Washington Post*, F1). Clearly medicine, like any other human service field, is not an exact science.